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Ed Danke  
Department of Environmental Quality  
Enforcement Division  
P.O. Box 200901  
Helena, MT 59620-0901

**ENVIRONMENTAL  
PROTECTION AGENCY**

**FFR 2 0 1998**

**MONTANA OFFICE**

Dear Ed:

This letter describes the sampling sites and analytical parameters which will be used in the initial sampling round to investigate the suspected water release(s) from the Asarco East Helena Smelter Site plant water circuit. The initial sampling round will provide characterization of major ions and metals in the area surrounding the suspected release(s). The wells and surface water sites to be sampled in this sampling round include these:

DH-9	Monitoring Well
DH-23	Monitoring Well
DH-28	Monitoring Well
DH-21	Monitoring Well
DH-27	Monitoring Well
DH-12	Monitoring Well
DH-16	Monitoring Well
DH-24	Monitoring Well
DH-6	Monitoring Well
DH-10A	Monitoring Well
Plant Water Storage tank	
PPC-5	Surface Water
PPC-7	Surface Water

A table listing analytical parameters, analytical methods and detection limits is attached. These samples will be submitted to the Asarco Salt Lake City Laboratory for rapid turn-around analysis. Based on the results of this sampling round, the parameter list will be reviewed and refined for subsequent sampling in consultation with your department.

We will begin sampling, Thursday, February 19th and will be coordinating with David Rise of your office. Please give either Jon Nickel or me a call if you have any questions or comments.

Sincerely,

Bill Thompson  
Senior Hydrogeologist

c: Jon Nickel, Asarco East Helena  
Susan Zazzali, EPA

**TABLE 1. PARAMETERS, ANALYTICAL METHODS, AND DETECTION  
LIMITS FOR INITIAL SAMPLING  
INVESTIGATION OF PLANT WATER RELEASE**

Parameter	Method <sup>1</sup>	Reporting Limit (mg/L)	Holding Time
pH	field analyzed	--	
Specific Conductivity	field analyzed	--	
Temperature	field analyzed only	--	
Dissolved Oxygen	field analyzed only		
pH	150.1	--	Analyze immediately
Specific Conductivity	120.1	--	28 days
TDS	160.1	10	7 days
Calcium (Ca)	6010A ICP	5	6 months
Magnesium (Mg)	6010A ICP	5	6 months
Sodium (Na)	6010A ICP	5	6 months
Potassium (K)	6010A ICP	5	6 months
Bicarbonate	310.1	5	14 days
Chloride	300.0	5	6 months
Sulfate	9036	5	6 months
<b>METALS</b>			
Arsenic (As)	6020 ICP/MS	0.003	6 months
Barium (Ba)	6020 ICP/MS	0.005	6 months
Cadmium (Cd)	6020 ICP/MS	0.0001	6 months
Copper (Cu)	6020 ICP/MS	0.001	6 months
Chromium (Cr)	6020 ICP/MS	0.001	6 months
Iron (Fe)	6020 ICP/MS	0.01	6 months
Lead (Pb)	6020 ICP/MS	0.003	6 months
Manganese (Mn)	6020 ICP/MS	0.005	6 months
Selenium (Se)	6020 ICP/MS	0.001	6 months
Silver (Ag)	6020 ICP/MS	0.003	6 months
Zinc (Zn)	6020 ICP/MS	0.01	6 months

\* Mercury omitted since it cannot be analyzed by ICP/MS preventing rapid turn-around